Patent Claims

1. Process for the manufacture of an optical transmission element (OA) with several optical waveguides (LW) and with a slot element (AR) surrounding the optical waveguides, which seals an interior space,
- where a filling compound (FM' ') is applied intermittently to the optical waveguides (LW) in liquid state,
- the optical waveguides are subsequently fed into an extruder (EX), where the extruder forms a slot element (AH) around the optical waveguides,
- where the filling compound (FM' ', FM', FM) expands within the formed slot element (AH), penetrates interstices present in the interior in the cross-section level of the transmission element and forms several dry, compressible elements (FE, FE1 to FE3) in its final state, which each surround the optical waveguides.

2. Process according to claim 1,
characterized by
polyurethane or silicones being used as the filling compound.

3. Process according to claim 1 or 2,
characterized by
the slot element (AH', AH) not being changed during the expanding process in its cross-section by the expanding filling compound (FM' ', FM', FM).

4. Process according to one of the claims 1 to 3,
characterized by
the filling compound (FM' ') within the formed slot element (AH) beginning to expand only after leaving the extruder (EX), preferably only when the slot element is in a rigid state.

5. Process according to claim 4,

characterized by

the delay period between application and the beginning of expansion of the filling compound (FM' ') being set dependent on the pay-off speed of the slot element (AH), amounting preferably to at least one and a maximum of 300 seconds.

6. Process according to one of the claims 1 to 5,

characterized by

the expansion of the filling compound (FM' ', FM' ) being initiated and/or aided by a supply of heat.

7. Optical transmission element (OA)

- with several optical waveguides )LW) and with a slot element (AH) surrounding the optical waveguides, which seals an interior space,
- with several dry and compressible filling elements (FE, FE1 to FE3), which are arranged in the interior space and are formed by material (FM) expanding within the interior space, where a defined contact pressure is applied by the filling elements against the slot element (AH) and against the optical waveguides (LW) for anchoring them in longitudinal direction of the transmission element and where position changes of the optical waveguides are possible,
- where the filling elements (FE, FE1 to FE3) each surround the optical waveguides (LW), completely fill and penetrate interstices between the optical waveguides present in the cross-section level of the transmission element and are essentially in all-around contact with the optical waveguides (LW) and the slot element (AH).

8. Optical transmission element according to claim 7,

characterized by

the material of the filling elements (FE, FE1 to FE3) being made of polyurethane or silicones.

9. Optical transmission element according to claim 7 or 8,
characterized by
the filling elements (FE, FE1 to FE3) being made of a material (FM) expanding starting from a liquid state.

10. Optical transmission element according to one of the claims 7 to 9,
characterized by
several separate filling elements (FE, FE1 to FE3) being arranged in the longitudinal direction of the optical transmission element (OA) with intermediate interstices (ZW) not being occupied by filling elements.

11. Optical transmission element according to one of the claims 7 to 10,
characterized by
the filling elements (FE, FE1 to FE3) containing a medium for sealing, which swells during water penetration.

12. Optical transmission element according to one of the claims 7 to 11,
characterized by
the filling elements (FE, FE1 to FE3) being made in such a way, that they can be removed from the optical waveguides easily and completely without using additional tools.